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## SEQUENCE LISTING

<110> Macina, Roberto A.  
Nair, Manoj  
Chen, Seiyu

<120> Compositions and Methods Relating to Lung Specific Genes

<130> DEX-0214

<140> 09/909,567

<141> 2001-07-20

<150> 60/219,834

<151> 2000-07-21

<160> 56

<170> PatentIn version 3.1

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<212> DNA

<213> Homo sapien

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&lt;213&gt; Homo sapien

&lt;400&gt; 15

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aaaa 7444

<210> 38  
 <211> 2475  
 <212> DNA  
 <213> Homo sapien

<220>  
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 <223> a, c, g or t

<220>  
 <221> misc\_feature  
 <222> (1011)..(1011)  
 <223> a, c, g or t

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<210> 39  
 <211> 298  
 <212> PRT  
 <213> Homo sapien

<400> 39

Trp Ser Tyr Arg Gly Gly Gly Arg Tyr Tyr Ala Asp Ser Val Arg Gly  
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Arg Thr Val Ser Arg Asp Asn Ala Lys Asn Ser Tyr Met Asn Ser Arg  
 20 25 30

Ala Asp Thr Ala Val Tyr Cys Ala Arg Ala Asn Tyr Asp Cys Trp Ser  
 35 40 45

Gly Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Ser Val Ala Cys  
 50 55 60

Ser Arg Ser Thr Ser Gly Gly Thr Ala Ala Gly Cys Val Lys Asp Tyr  
 65 70 75 80

Val Thr Val Ser Trp Asn Ser Gly Ala Thr Ser Gly Val His Thr Ala  
 85 90 95

Val Ser Ser Gly Tyr Ser Ser Ser Val Val Thr Val Ser Ser Ser Gly  
 100 105 110

Thr Thr Tyr Thr Cys Asn Val Asn His Lys Ser Asn Thr Lys Val Asp  
 115 120 125

Lys Arg Val Lys Thr Gly Asp Thr Thr His Thr Cys Arg Cys Lys Ser  
 130 135 140

Cys Asp Thr Cys Arg Cys Lys Ser Cys Asp Thr Cys Arg Cys Ala Gly  
 145 150 155 160

Gly Ser Val Lys Lys Asp Thr Met Ser Arg Thr Val Thr Cys Val Val  
 165 170 175

Val Asp Val Ser His Asp Val Lys Trp Tyr Val Asp Gly Val Val His  
 180 185 190

Asn Ala Lys Thr Lys Arg Asn Ser Thr Arg Val Val Ser Val Thr Val  
 195 200 205

His Asp Trp Asn Gly Lys Tyr Lys Cys Lys Val Ser Asn Lys Ala Ala  
 210 215 220

Lys Thr Ser Lys Thr Lys Gly Arg Val Tyr Thr Ser Arg Met Thr Lys  
 225 230 235 240

Asn Val Ser Thr Cys Val Lys Gly Tyr Ser Asp Ala Val Trp Ser Ser  
 245 250 255

Gly Asn Asn Tyr Asn Thr Thr Met Asp Ser Asp Gly Ser Tyr Ser Lys  
 260 265 270

Thr Val Asp Lys Ser Arg Trp Gly Asn Ser Cys Ser Val Met His Ala  
 275 280 285

His Asn Arg Thr Lys Ser Ser Ser Gly Lys  
 290 295

<210> 40  
 <211> 168  
 <212> PRT  
 <213> Homo sapien

<400> 40

Pro Gln Leu Ala Cys Leu Phe Gln Val Lys Ser Gly Ser Pro Ala Val  
 1 5 10 15

Leu Ala Phe Ala Lys Glu Lys Ser Phe Gly Trp Pro Ser Phe Ile Thr  
 20 25 30

Tyr Thr Val Gly Val Ser Asp Pro Ala Ala Gly Ser Gln Gly Pro Leu  
 35 40 45

Ser Thr Thr Leu Thr Phe Ser Ser Pro Val Thr Asn Gln Ala Ile Ala  
 50 55 60

Ile Pro Val Thr Val Ala Phe Val Met Asp Arg Arg Gly Pro Gly Pro  
 65 70 75 80

Tyr Gly Ala Ser Leu Phe Gln His Phe Leu Asp Ser Tyr Gln Val Met  
 85 90 95

Phe Phe Thr Leu Phe Ala Leu Leu Ala Gly Thr Ala Val Met Ile Ile  
 100 105 110

Ala Tyr His Thr Val Cys Thr Pro Arg Asp Leu Ala Val Pro Ala Ala  
 115 120 125

Leu Thr Pro Arg Ala Ser Pro Gly His Ser Pro His Tyr Phe Ala Ala  
 130 135 140

Ser Ser Pro Thr Ser Pro Asn Ala Leu Pro Pro Ala Arg Lys Ala Ser  
 145 150 155 160

Pro Pro Ser Gly Leu Trp Ser Pro  
165

<210> 41  
<211> 78  
<212> PRT  
<213> Homo sapien

<400> 41

Val Ser Glu Gly Ala Thr Trp Ala Ile Gly Phe Pro Ala Ser Phe Pro  
1 5 10 15

Leu Phe Leu Ala Pro Ala Ala Glu Ala Gly Arg Pro Trp Arg Thr Ser  
20 25 30

Trp Gly Leu Thr Ala Ala Ser Pro Gly Ser Ser Trp Gly His Leu Ser  
35 40 45

Ser Lys Val Cys Thr Gln Glu Val Pro His His Ile Gln Pro His Gly  
50 55 60

Ser Pro Arg Ser Ala Arg Gln Gln Ile Arg Ala Pro Cys His  
65 70 75

<210> 42  
<211> 1118  
<212> PRT  
<213> Homo sapien

<400> 42

Met Ala Arg Ser Pro Gly Arg Ala Tyr Ala Leu Leu Leu Leu Ile  
1 5 10 15

Cys Phe Asn Val Gly Ser Gly Leu His Leu Gln Val Leu Ser Thr Arg  
20 25 30

Asn Glu Asn Lys Leu Leu Pro Lys His Pro His Leu Val Arg Gln Lys  
35 40 45

Arg Ala Trp Ile Thr Ala Pro Val Ala Leu Arg Glu Gly Glu Asp Leu  
50 55 60

Ser Lys Lys Asn Pro Ile Ala Lys Ile His Ser Asp Leu Ala Glu Glu  
65 70 75 80

Arg Gly Leu Lys Ile Thr Tyr Lys Tyr Thr Gly Lys Gly Ile Thr Glu  
85 90 95

Pro Pro Phe Gly Ile Phe Val Phe Asn Lys Asp Thr Gly Glu Leu Asn  
100 105 110

Val Thr Ser Ile Leu Asp Arg Glu Glu Thr Pro Phe Phe Leu Leu Thr  
115 120 125

Gly Tyr Ala Leu Asp Ala Arg Gly Asn Asn Val Glu Lys Pro Leu Glu  
130 135 140

Leu Arg Ile Lys Val Leu Asp Ile Asn Asp Asn Glu Pro Val Phe Thr  
145 150 155 160

Gln Asp Val Phe Val Gly Ser Val Glu Glu Leu Ser Ala Ala His Thr  
165 170 175

Leu Val Met Lys Ile Asn Ala Thr Asp Ala Asp Glu Pro Asn Thr Leu  
180 185 190

Asn Ser Lys Ile Ser Tyr Arg Ile Val Ser Leu Glu Pro Ala Tyr Pro  
195 200 205

Pro Val Phe Tyr Leu Asn Lys Asp Thr Gly Glu Ile Tyr Thr Thr Ser  
210 215 220

Val Thr Leu Asp Arg Glu Glu His Ser Ser Tyr Thr Leu Thr Val Glu  
225 230 235 240

Ala Arg Asp Gly Asn Gly Glu Val Thr Asp Lys Pro Val Lys Gln Ala  
245 250 255

Gln Val Gln Ile Arg Ile Leu Asp Val Asn Asp Asn Ile Pro Val Val  
260 265 270

Glu Asn Lys Val Leu Glu Gly Met Val Glu Glu Asn Gln Val Asn Val  
275 280 285

Glu Val Thr Arg Ile Lys Val Phe Asp Ala Asp Glu Ile Gly Ser Asp  
290 295 300

Asn Trp Leu Ala Asn Phe Thr Phe Ala Ser Gly Asn Glu Gly Gly Tyr  
305 310 315 320

Phe His Ile Glu Thr Asp Ala Gln Thr Asn Glu Gly Ile Val Thr Leu  
 325 330 335

Ile Lys Glu Val Asp Tyr Glu Glu Met Lys Asn Leu Asp Phe Ser Val  
 340 345 350

Ile Val Ala Asn Lys Ala Ala Phe His Lys Ser Ile Arg Ser Lys Tyr  
 355 360 365

Lys Pro Thr Pro Ile Pro Ile Lys Val Lys Val Lys Asn Val Lys Glu  
 370 375 380

Gly Ile His Phe Lys Ser Ser Val Ile Ser Ile Tyr Val Ser Glu Ser  
 385 390 395 400

Met Asp Arg Ser Ser Lys Gly Gln Ile Ile Gly Asn Phe Gln Ala Phe  
 405 410 415

Asp Glu Asp Thr Gly Leu Pro Ala His Ala Arg Tyr Val Lys Leu Glu  
 420 425 430

Asp Arg Asp Asn Trp Ile Ser Val Asp Ser Val Thr Ser Glu Ile Lys  
 435 440 445

Leu Ala Lys Leu Pro Asp Phe Glu Ser Arg Tyr Val Gln Asn Gly Thr  
 450 455 460

Tyr Thr Val Lys Ile Val Ala Ile Ser Glu Asp Tyr Pro Arg Lys Thr  
 465 470 475 480

Ile Thr Gly Thr Val Leu Ile Asn Val Glu Asp Ile Asn Asp Asn Cys  
 485 490 495

Pro Thr Leu Ile Glu Pro Val Gln Thr Ile Cys His Asp Ala Glu Tyr  
 500 505 510

Val Asn Val Thr Ala Glu Asp Leu Asp Gly His Pro Asn Ser Gly Pro  
 515 520 525

Phe Ser Phe Ser Val Ile Asp Lys Pro Pro Gly Met Ala Glu Lys Trp  
 530 535 540

Lys Ile Ala Arg Gln Glu Ser Thr Ser Val Leu Leu Gln Gln Ser Glu





Glu Glu Asp Glu Asn His Thr Ala Lys Asp Cys Leu Leu Val Tyr Ser  
 785 790 795 800

Gln Glu Glu Thr Glu Ser Leu Asn Ala Ser Ile Gly Cys Cys Ser Phe  
 805 810 815

Ile Glu Gly Glu Leu Asp Asp Arg Phe Leu Asp Asp Leu Gly Leu Lys  
 820 825 830

Phe Lys Thr Leu Ala Glu Val Cys Leu Gly Gln Lys Ile Asp Ile Asn  
 835 840 845

Lys Glu Ile Glu Gln Arg Gln Lys Pro Ala Thr Glu Thr Ser Met Asn  
 850 855 860

Thr Ala Ser His Ser Leu Cys Glu Gln Thr Met Val Asn Ser Glu Asn  
 865 870 875 880

Thr Tyr Ser Ser Gly Ser Ser Phe Pro Val Pro Lys Ser Leu Gln Glu  
 885 890 895

Ala Asn Ala Glu Lys Val Thr Gln Glu Ile Val Thr Glu Arg Ser Val  
 900 905 910

Ser Ser Arg Gln Ala Gln Lys Val Ala Thr Pro Leu Pro Asp Pro Met  
 915 920 925

Ala Ser Arg Asn Val Ile Ala Thr Glu Thr Ser Tyr Val Thr Gly Ser  
 930 935 940

Thr Met Pro Pro Thr Thr Val Ile Leu Gly Pro Ser Gln Pro Gln Ser  
 945 950 955 960

Leu Ile Val Thr Glu Arg Val Tyr Ala Pro Ala Ser Thr Leu Val Asp  
 965 970 975

Gln Pro Tyr Ala Asn Glu Gly Thr Val Val Val Thr Glu Arg Val Ile  
 980 985 990

Gln Pro His Gly Gly Gly Ser Asn Pro Leu Glu Gly Thr Gln His Leu  
 995 1000 1005

Gln Asp Val Pro Tyr Val Met Val Arg Glu Arg Glu Ser Phe Leu  
 1010 1015 1020

Ala Pro Ser Ser Gly Val Gln Pro Thr Leu Ala Met Pro Asn Ile  
1025 1030 1035

Ala Val Gly Gln Asn Val Thr Val Thr Glu Arg Val Leu Ala Pro  
1040 1045 1050

Ala Ser Thr Leu Gln Ser Ser Tyr Gln Ile Pro Thr Glu Asn Ser  
1055 1060 1065

Met Thr Ala Arg Asn Thr Thr Val Ser Gly Ala Gly Val Pro Gly  
1070 1075 1080

Pro Leu Pro Asp Phe Gly Leu Glu Glu Ser Gly His Ser Asn Ser  
1085 1090 1095

Thr Ile Thr Thr Ser Ser Thr Arg Val Thr Lys His Ser Thr Val  
1100 1105 1110

Gln His Ser Tyr Ser  
1115

<210> 43  
<211> 97  
<212> PRT  
<213> Homo sapien

<400> 43

Met Thr Lys Gly Thr Ser Ser Phe Gly Lys Arg Arg Asn Lys Thr His  
1 5 10 15

Thr Leu Cys Arg Arg Cys Gly Ser Lys Ala Tyr His Leu Gln Lys Ser  
20 25 30

Thr Cys Gly Lys Cys Gly Tyr Pro Ala Lys Arg Lys Arg Lys Tyr Asn  
35 40 45

Trp Ser Ala Lys Ala Lys Arg Arg Asn Thr Thr Gly Thr Gly Arg Met  
50 55 60

Arg His Leu Lys Ile Val Tyr Arg Arg Phe Arg His Gly Phe Arg Glu  
65 70 75 80

Gly Thr Thr Pro Lys Pro Lys Arg Ala Ala Val Ala Ala Ser Ser Ser  
85 90 95

Ser

<210> 44  
 <211> 889  
 <212> PRT  
 <213> Homo sapien

&lt;400&gt; 44

Met Ala Ala Ala Val Gly Val Arg Gly Arg Tyr Glu Leu Pro Pro Cys  
 1 5 10 15

Ser Gly Pro Gly Trp Leu Leu Ser Leu Ser Ala Leu Leu Ser Val Ala  
 20 25 30

Ala Arg Gly Ala Phe Ala Thr Thr His Trp Val Val Thr Glu Asp Gly  
 35 40 45

Lys Ile Gln Gln Gln Val Asp Ser Pro Met Asn Leu Lys His Pro His  
 50 55 60

Asp Leu Val Ile Leu Met Arg Gln Glu Ala Thr Val Asn Tyr Leu Lys  
 65 70 75 80

Glu Leu Glu Lys Gln Leu Val Ala Gln Lys Ile His Ile Glu Glu Asn  
 85 90 95

Glu Asp Arg Asp Thr Gly Leu Glu Gln Arg His Asn Lys Glu Asp Pro  
 100 105 110

Asp Cys Ile Lys Ala Lys Val Pro Leu Gly Asp Leu Asp Leu Tyr Asp  
 115 120 125

Gly Thr Tyr Ile Thr Leu Glu Ser Lys Asp Ile Ser Pro Glu Asp Tyr  
 130 135 140

Ile Asp Thr Glu Ser Pro Val Pro Pro Asp Pro Glu Gln Pro Asp Cys  
 145 150 155 160

Thr Lys Ile Leu Glu Leu Pro Tyr Ser Ile His Ala Phe Gln His Leu  
 165 170 175

Arg Gly Val Gln Glu Arg Val Asn Leu Ser Ala Pro Leu Leu Pro Lys  
 180 185 190

Glu Asp Pro Ile Phe Thr Tyr Leu Ser Lys Arg Leu Gly Arg Ser Ile  
 195 200 205

Asp Asp Ile Gly His Leu Ile His Glu Gly Leu Gln Lys Asn Thr Ser  
 210 215 220

Ser Trp Val Leu Tyr Asn Met Ala Ser Phe Tyr Trp Arg Ile Lys Asn  
 225 230 235 240

Glu Pro Tyr Gln Val Val Glu Cys Ala Met Arg Ala Leu His Phe Ser  
 245 250 255

Ser Arg His Asn Lys Asp Ile Ala Leu Val Asn Leu Ala Asn Val Leu  
 260 265 270

His Arg Ala His Phe Ser Ala Asp Ala Ala Val Val Val His Ala Ala  
 275 280 285

Leu Asp Asp Ser Asp Phe Phe Thr Ser Tyr Tyr Thr Leu Gly Asn Ile  
 290 295 300

Tyr Ala Met Leu Gly Glu Tyr Asn His Ser Val Leu Cys Tyr Asp His  
 305 310 315 320

Ala Leu Gln Ala Arg Pro Gly Phe Glu Gln Ala Ile Lys Arg Lys His  
 325 330 335

Ala Val Leu Cys Gln Gln Lys Leu Glu Gln Lys Leu Glu Ala Gln His  
 340 345 350

Arg Ser Leu Gln Arg Thr Leu Asn Glu Leu Lys Glu Tyr Gln Lys Gln  
 355 360 365

His Asp His Tyr Leu Arg Gln Gln Glu Ile Leu Glu Lys His Lys Leu  
 370 375 380

Ile Gln Glu Glu Gln Ile Leu Arg Asn Ile Ile His Glu Thr Gln Met  
 385 390 395 400

Ala Lys Glu Ala Gln Leu Gly Asn His Gln Ile Cys Arg Leu Val Asn  
 405 410 415

Gln Gln His Ser Leu His Cys Gln Trp Asp Gln Pro Val Arg Tyr His  
 420 425 430

Arg Gly Asp Ile Phe Glu Asn Val Asp Tyr Val Gln Phe Gly Glu Asp  
 435 440 445

Ser Ser Thr Ser Ser Met Met Ser Val Asn Phe Asp Val Gln Ser Asn  
 450 455 460

Gln Ser Asp Ile Asn Asp Ser Val Lys Ser Ser Pro Val Ala His Ser  
 465 470 475 480

Ile Leu Trp Ile Trp Gly Arg Asp Ser Asp Ala Tyr Arg Asp Lys Gln  
 485 490 495

His Ile Leu Trp Pro Lys Arg Ala Asp Cys Thr Glu Ser Tyr Pro Arg  
 500 505 510

Val Pro Val Gly Gly Glu Leu Pro Thr Tyr Phe Leu Pro Pro Glu Asn  
 515 520 525

Lys Gly Leu Arg Ile His Glu Leu Ser Ser Asp Asp Tyr Ser Thr Glu  
 530 535 540

Glu Glu Ala Gln Thr Pro Asp Cys Ser Ile Thr Asp Phe Arg Lys Ser  
 545 550 555 560

His Thr Leu Ser Tyr Leu Val Lys Glu Leu Glu Val Arg Met Asp Leu  
 565 570 575

Lys Ala Lys Met Pro Asp Asp His Ala Arg Lys Ile Leu Leu Ser Arg  
 580 585 590

Ile Asn Asn Tyr Thr Ile Pro Glu Glu Glu Ile Gly Ser Phe Leu Phe  
 595 600 605

His Ala Ile Asn Lys Pro Asn Ala Pro Ile Trp Leu Ile Leu Asn Glu  
 610 615 620

Ala Gly Leu Tyr Trp Arg Ala Val Gly Asn Ser Thr Phe Ala Ile Ala  
 625 630 635 640

Cys Leu Gln Arg Ala Leu Asn Leu Ala Pro Leu Gln Tyr Gln Asp Val  
 645 650 655

Pro Leu Val Asn Leu Ala Asn Leu Leu Ile His Tyr Gly Leu His Leu

660

665

670

Asp Ala Thr Lys Leu Leu Leu Gln Ala Leu Ala Ile Asn Ser Ser Glu  
 675 680 685

Pro Leu Thr Phe Leu Ser Leu Gly Asn Ala Tyr Leu Ala Leu Lys Asn  
 690 695 700

Ile Ser Gly Ala Leu Glu Ala Phe Arg Gln Ala Leu Lys Leu Thr Thr  
 705 710 715 720

Lys Cys Pro Glu Cys Glu Asn Ser Leu Lys Leu Ile Arg Cys Met Gln  
 725 730 735

Phe Tyr Pro Phe Leu Tyr Asn Ile Thr Ser Ser Val Cys Ser Gly Thr  
 740 745 750

Val Val Glu Glu Ser Asn Gly Ser Asp Glu Met Glu Asn Ser Asp Glu  
 755 760 765

Thr Lys Met Ser Glu Glu Ile Leu Ala Leu Val Asp Glu Phe Gln Gln  
 770 775 780

Ala Trp Pro Leu Glu Gly Phe Gly Gly Ala Leu Glu Met Lys Gly Arg  
 785 790 795 800

Arg Leu Asp Leu Gln Gly Ile Arg Val Leu Lys Lys Gly Pro Gln Asp  
 805 810 815

Gly Val Ala Arg Ser Ser Cys Tyr Gly Asp Cys Arg Ser Glu Asp Asp  
 820 825 830

Glu Ala Thr Glu Trp Ile Thr Phe Gln Val Lys Arg Val Lys Lys Pro  
 835 840 845

Lys Gly Asp His Lys Lys Thr Pro Gly Lys Lys Val Glu Thr Gly Gln  
 850 855 860

Ile Glu Asn Gly His Arg Tyr Gln Ala Asn Leu Glu Ile Thr Gly Pro  
 865 870 875 880

Lys Val Ala Ser Pro Gly Pro Gln Gly  
 885

<210> 45  
 <211> 690  
 <212> PRT  
 <213> Homo sapien

<400> 45

Phe Leu Thr Leu Phe Ile Phe Arg Ser Gly Leu Cys Arg Gly Asn Ser  
 1 5 10 15

Val Glu Arg Lys Ile Tyr Ile Pro Leu Asn Lys Thr Ala Pro Cys Val  
 20 25 30

Arg Leu Leu Asn Ala Thr His Gln Ile Gly Cys Gln Ser Ser Ile Ser  
 35 40 45

Gly Asp Thr Gly Val Ile His Val Val Glu Lys Glu Glu Asp Leu Gln  
 50 55 60

Trp Val Leu Thr Asp Gly Pro Asn Pro Pro Tyr Met Val Leu Leu Glu  
 65 70 75 80

Ser Lys His Phe Thr Arg Asp Leu Met Glu Lys Leu Lys Gly Arg Thr  
 85 90 95

Ser Arg Ile Ala Gly Leu Ala Val Ser Leu Thr Lys Pro Ser Pro Ala  
 100 105 110

Ser Gly Phe Ser Pro Ser Val Gln Cys Pro Asn Asp Gly Phe Gly Val  
 115 120 125

Tyr Ser Asn Ser Tyr Gly Pro Glu Phe Ala His Cys Arg Glu Ile Gln  
 130 135 140

Trp Asn Ser Leu Gly Asn Gly Leu Ala Tyr Glu Asp Phe Ser Phe Pro  
 145 150 155 160

Ile Phe Leu Leu Glu Asp Glu Asn Glu Thr Lys Val Ile Lys Gln Cys  
 165 170 175

Tyr Gln Asp His Asn Leu Ser Gln Asn Gly Ser Ala Pro Thr Phe Pro  
 180 185 190

Leu Cys Ala Met Gln Leu Phe Ser His Met His Ala Val Ile Ser Thr  
 195 200 205

Ala Thr Cys Met Arg Arg Ser Ser Ile Gln Ser Thr Phe Ser Ile Asn  
 210 215 220

Pro Glu Ile Val Cys Asp Pro Leu Ser Asp Tyr Asn Val Trp Ser Met  
 225 230 235 240

Leu Lys Pro Ile Asn Thr Thr Gly Thr Leu Lys Pro Asp Asp Arg Val  
 245 250 255

Val Val Ala Ala Thr Arg Leu Asp Ser Arg Ser Phe Phe Trp Asn Val  
 260 265 270

Ala Pro Gly Ala Glu Ser Ala Val Ala Ser Phe Val Thr Gln Leu Ala  
 275 280 285

Ala Ala Glu Ala Leu Gln Lys Ala Pro Asp Val Thr Thr Leu Pro Arg  
 290 295 300

Asn Val Met Phe Val Phe Phe Gln Gly Glu Thr Phe Asp Tyr Ile Gly  
 305 310 315 320

Ser Ser Arg Met Val Tyr Asp Met Glu Lys Gly Lys Phe Pro Val Gln  
 325 330 335

Leu Glu Asn Val Asp Ser Phe Val Glu Leu Gly Gln Val Ala Leu Arg  
 340 345 350

Thr Ser Leu Glu Leu Trp Met His Thr Asp Pro Val Ser Gln Lys Asn  
 355 360 365

Glu Ser Val Arg Asn Gln Val Glu Asp Leu Leu Ala Thr Leu Glu Lys  
 370 375 380

Ser Gly Ala Gly Val Pro Ala Val Ile Leu Arg Arg Pro Asn Gln Ser  
 385 390 395 400

Gln Pro Leu Pro Pro Ser Ser Leu Gln Arg Phe Leu Arg Ala Arg Asn  
 405 410 415

Ile Ser Gly Val Val Leu Ala Asp His Ser Gly Ala Phe His Asn Lys  
 420 425 430

Tyr Tyr Gln Ser Ile Tyr Asp Thr Ala Glu Asn Ile Asn Val Ser Tyr  
 435 440 445



Pro Glu Trp Leu Ser Pro Glu Glu Asp Leu Asn Phe Val Thr Asp Thr  
 450 455 460

Ala Lys Ala Leu Ala Asp Val Ala Thr Val Leu Gly Arg Ala Leu Tyr  
 465 470 475 480

Glu Leu Ala Gly Gly Thr Asn Phe Ser Asp Thr Val Gln Ala Asp Pro  
 485 490 495

Gln Thr Val Thr Arg Leu Leu Tyr Gly Phe Leu Ile Lys Ala Asn Asn  
 500 505 510

Ser Trp Phe Gln Ser Ile Leu Arg Gln Asp Leu Arg Ser Tyr Leu Gly  
 515 520 525

Asp Gly Pro Leu Gln His Tyr Ile Ala Val Ser Ser Pro Thr Asn Thr  
 530 535 540

Thr Tyr Val Val Gln Tyr Ala Leu Ala Asn Leu Thr Gly Thr Val Val  
 545 550 555 560

Asn Leu Thr Arg Glu Gln Cys Gln Asp Pro Ser Lys Val Pro Ser Glu  
 565 570 575

Asn Lys Asp Leu Tyr Glu Tyr Ser Trp Val Gln Gly Pro Leu His Ser  
 580 585 590

Asn Glu Thr Asp Arg Leu Pro Arg Cys Val Arg Ser Thr Ala Arg Leu  
 595 600 605

Ala Arg Ala Leu Ser Pro Ala Phe Glu Leu Ser Gln Trp Ser Ser Thr  
 610 615 620

Glu Tyr Ser Thr Trp Thr Glu Ser Arg Trp Lys Asp Ile Arg Ala Arg  
 625 630 635 640

Ile Phe Leu Ile Ala Ser Lys Glu Leu Glu Leu Ile Thr Leu Thr Val  
 645 650 655

Gly Phe Gly Ile Leu Ile Phe Ser Leu Ile Val Thr Tyr Cys Ile Asn  
 660 665 670

Ala Lys Ala Asp Val Leu Phe Ile Ala Pro Arg Glu Pro Gly Ala Val  
 675 680 685

Ser Tyr  
690

<210> 46  
<211> 170  
<212> PRT  
<213> Homo sapien

<400> 46

Gln Val Pro Arg Ser Lys Ala Leu Glu Val Thr Lys Leu Ala Ile Glu  
1 5 10 15

Ala Gly Phe Arg His Ile Asp Ser Ala His Leu Tyr Asn Asn Glu Glu  
20 25 30

Gln Val Gly Leu Ala Ile Arg Ser Lys Ile Ala Asp Gly Ser Val Lys  
35 40 45

Arg Glu Asp Ile Phe Tyr Thr Ser Lys Leu Trp Ser Thr Phe His Arg  
50 55 60

Pro Glu Leu Val Arg Pro Ala Leu Glu Asn Ser Leu Lys Lys Ala Gln  
65 70 75 80

Leu Asp Tyr Val Asp Leu Tyr Leu Ile His Ser Pro Met Ser Leu Lys  
85 90 95

Pro Gly Glu Glu Leu Ser Pro Thr Asp Glu Gln Val Ala Lys Val Ile  
100 105 110

Phe Asp Ile Val Asp Leu Cys Thr Thr Trp Glu Gly Met Glu Lys Cys  
115 120 125

Lys Asp Gly Arg Asn Trp Gly Lys Ser Ile Gly Val Ser His Phe Asn  
130 135 140

Pro Gln Ala Leu Gly Met Ser Leu Gln Lys Ala Gly Ile Gln Leu Lys  
145 150 155 160

Arg Ser Ala Pro Val Glu Cys Pro Ile Tyr  
165 170

<210> 47  
<211> 1596

&lt;212&gt; PRT

&lt;213&gt; Homo sapien

&lt;400&gt; 47

Met Thr Thr Glu Thr Gly Pro Asp Ser Glu Val Lys Lys Ala Gln Glu  
1 5 10 15

Glu Ala Pro Gln Gln Pro Glu Ala Ala Ala Val Thr Thr Pro Val  
20 25 30

Thr Pro Ala Gly His Gly His Pro Glu Ala Asn Ser Asn Glu Lys His  
35 40 45

Pro Ser Gln Gln Asp Thr Arg Pro Ala Glu Gln Ser Leu Asp Met Glu  
50 55 60

Glu Lys Asp Tyr Ser Glu Ala Asp Gly Leu Ser Glu Arg Thr Thr Pro  
65 70 75 80

Ser Lys Ala Gln Lys Ser Pro Gln Lys Ile Ala Lys Lys Tyr Lys Ser  
85 90 95

Ala Ile Cys Arg Val Thr Leu Leu Asp Ala Ser Glu Tyr Glu Cys Glu  
100 105 110

Val Glu Lys His Gly Arg Gly Gln Val Leu Phe Asp Leu Val Cys Glu  
115 120 125

His Leu Asn Leu Leu Glu Lys Asp Tyr Phe Gly Leu Thr Phe Cys Asp  
130 135 140

Ala Asp Ser Gln Lys Asn Trp Leu Asp Pro Ser Lys Glu Ile Lys Lys  
145 150 155 160

Gln Ile Arg Ser Glu Trp Leu Val Val Phe Gly Glu Val Gly Ser Pro  
165 170 175

Trp Asn Phe Ala Phe Thr Val Lys Phe Tyr Pro Pro Asp Pro Ala Gln  
180 185 190

Leu Thr Glu Asp Ile Thr Arg Tyr Tyr Leu Cys Leu Gln Leu Arg Ala  
195 200 205

Asp Ile Ile Thr Gly Arg Leu Pro Cys Ser Phe Val Thr His Ala Leu  
210 215 220

Leu Gly Ser Tyr Ala Val Gln Ala Glu Leu Gly Asp Tyr Asp Ala Glu  
225 230 235 240

Glu His Val Gly Asn Tyr Val Ser Glu Leu Arg Phe Ala Pro Asn Gln  
245 250 255

Thr Arg Glu Leu Glu Glu Arg Ile Met Glu Leu His Lys Thr Tyr Arg  
260 265 270

Gly Met Thr Pro Gly Glu Ala Glu Ile His Phe Leu Glu Asn Ala Lys  
275 280 285

Lys Leu Ser Met Tyr Gly Val Asp Leu His His Ala Lys Asp Ser Glu  
290 295 300

Gly Ile Asp Ile Met Leu Gly Val Cys Ala Asn Gly Leu Leu Ile Tyr  
305 310 315 320

Arg Asp Arg Leu Arg Ile Asn Arg Phe Ala Trp Pro Lys Ile Leu Lys  
325 330 335

Ile Ser Tyr Lys Arg Ser Asn Phe Tyr Ile Lys Ile Arg Pro Gly Glu  
340 345 350

Tyr Glu Gln Phe Glu Ser Thr Ile Gly Phe Lys Leu Pro Asn His Arg  
355 360 365

Ser Ala Lys Arg Leu Trp Lys Val Cys Ile Glu His His Thr Phe Phe  
370 375 380

Arg Leu Val Ser Pro Glu Pro Pro Pro Lys Gly Phe Leu Val Met Gly  
385 390 395 400

Ser Lys Phe Arg Tyr Ser Gly Arg Thr Gln Ala Gln Thr Arg Gln Ala  
405 410 415

Ser Ala Leu Ile Asp Arg Pro Ala Pro Phe Phe Glu Arg Ser Ser Ser  
420 425 430

Lys Arg Tyr Thr Met Ser Arg Ser Leu Asp Gly Ala Glu Phe Ser Arg  
435 440 445

Pro Ala Ser Val Ser Glu Asn His Asp Ala Gly Pro Asp Gly Asp Lys

450		455		460
Arg Asp Glu Asp Gly Glu Ser Gly Gly Gln Arg Ser Glu Ala Glu Glu				
465		470		475 480
Gly Glu Val Arg Thr Pro Thr Lys Ile Lys Glu Leu Lys Phe Leu Asp				
	485		490	495
Lys Pro Glu Asp Val Leu Leu Lys His Gln Ala Ser Ile Asn Glu Leu				
	500		505	510
Lys Arg Thr Leu Lys Glu Pro Asn Ser Lys Leu Ile His Arg Asp Arg				
	515		520	525
Asp Trp Glu Arg Glu Arg Arg Leu Pro Ser Ser Pro Ala Ser Pro Ser				
	530		535	540
Pro Lys Gly Thr Pro Glu Lys Ala Asn Glu Ser Gln Arg Thr Gln Asp				
	545		550	555 560
Ile Ser Gln Arg Asp Leu Val Pro Glu Pro Gly Ala Ala Ala Gly Leu				
	565		570	575
Glu Val Phe Thr Gln Lys Ser Leu Ala Ala Ser Pro Glu Gly Ser Glu				
	580		585	590
His Trp Val Phe Ile Glu Arg Glu Tyr Thr Arg Pro Glu Glu Leu Gly				
	595		600	605
Leu Leu Lys Val Thr Thr Met Gln Gln Glu Glu Arg Gln Ala Gly Leu				
	610		615	620
Ala Gly Ile Leu Ala Asn Gly Arg Leu Ser Lys Val Asp Val Leu Val				
	625		630	635 640
Asp Lys Phe Lys Val Glu Val Ala Thr Glu Glu Met Val Gly Asn Arg				
	645		650	655
Arg Ala Asn Thr Gln Gln Gln Gly Lys Met Ile Ala Ser Pro Glu Asp				
	660		665	670
Phe Glu Ser Val Gly Glu Glu Gly Pro Trp Ile Arg Glu Ser Pro Gly				
	675		680	685

Gly Ala Ala Leu Ala Ser Gly Arg Thr Leu Ala Glu Lys Leu Leu Glu  
 690 695 700

Gly Ser Glu Leu Arg Ala Asp Thr Arg Glu Ala Thr Ile Arg Asn Arg  
 705 710 715 720

Cys Met Ser Asp Gly Gln Pro Glu Gly Gln Thr Glu Leu Arg Lys Gly  
 725 730 735

Leu Glu Glu Pro His Thr Cys Gly Arg Pro Thr Ala Pro Gly Thr Arg  
 740 745 750

Pro Ala Glu Val Asp Val Leu Ser Pro Ala Ser Asp Lys Gly Gly Leu  
 755 760 765

Gln Ser Phe Leu Leu Asp Pro Ala His Ala Glu Ala Arg Ala Glu Leu  
 770 775 780

Ser Asn Glu Thr Asp Thr Ser Phe Ala Glu Arg Ser Phe Tyr Leu Asn  
 785 790 795 800

Tyr Glu Glu Lys Asp Ser Glu Asp Gln Val Leu Pro Pro Pro Leu Glu  
 805 810 815

Glu Arg Lys Gly Arg Leu Asp Ala Pro Pro Gly Gly Glu Pro Arg Pro  
 820 825 830

Thr Leu Asn Ser Leu Asp Leu Arg Val Ser Ala Ala Ala Ser Ser Arg  
 835 840 845

Ser Lys Asp Glu Ala His Met Thr Ser Pro Lys Glu Gly Ala Gly Thr  
 850 855 860

Pro Lys Asn His Gly Gly Pro Gly Asp Leu Lys Gly Ser Pro Ala Gly  
 865 870 875 880

Gln Thr Phe Ala Glu Gly Trp Glu Asp Ala Gln Trp Gly Val Glu Gly  
 885 890 895

Glu Phe Pro His Leu Thr Ala Ser Ala Ala Arg Glu Glu Gly Thr Pro  
 900 905 910

Val Ser Gly Asp Leu Leu Gly Lys Ala Glu Glu Ser Pro Thr Glu Glu  
 915 920 925

Leu Lys Lys His Pro Pro His Arg Gly Gln Gly Val His Pro Asp Pro  
 930 935 940

Gln Ala Cys Ala Leu Pro Arg Ala Ile Pro Leu Asn Val Arg Lys Pro  
 945 950 955 960

Val Lys Pro Asp Arg Gly Asn Phe Pro Pro Lys Glu Arg Gly Val Val  
 965 970 975

Pro Thr Gln Lys Gly Gly Ala Glu Leu Lys Asp Arg Glu Ala Ser Ala  
 980 985 990

Phe Leu His Met Glu Val Ile Ile Pro Leu Pro Ala Ser Pro Gly His  
 995 1000 1005

Ser Glu Asp Leu Ala Ala Leu Glu Glu Ala Ser Pro Ser Pro Thr  
 1010 1015 1020

Ser His Gly Ser Gly Glu Pro Ser Glu Leu Arg Glu Pro Phe Leu  
 1025 1030 1035

Arg His Val His Leu Ser Lys Ala Ser Pro Glu Pro Lys Asp Gln  
 1040 1045 1050

Val Gly Phe Val Val Ser Pro Ala Thr Gly Gly Glu Arg Arg Pro  
 1055 1060 1065

Pro Pro Ile Thr Ser Arg Lys Pro Arg Val Val Pro Glu Glu Ala  
 1070 1075 1080

Glu Gly Arg Ile Pro Leu Gly Phe Gly Phe Pro Ser Gly Lys Arg  
 1085 1090 1095

Arg Glu Met Thr Ser Phe Gln Ala Gly Asp Gln Glu Gly Ser Leu  
 1100 1105 1110

Glu Asp Ile Ser Lys Thr Ser Val Ala Asn Lys Ile Arg Ile Phe  
 1115 1120 1125

Glu Thr His Gly Ala Glu Thr Arg Arg Met Ser Glu Gly Glu Ala  
 1130 1135 1140

Arg Ser Leu Pro Asn Asp Val Ser Ser Glu Ala Pro Val Gly Gln  
 1145 1150 1155

Ala	Glu	Gln	Gln	Arg	Ser	Thr	Leu	Ser	Asp	Leu	Gly	Phe	Ala	Gln
1160						1165					1170			
Leu	Gln	Pro	Pro	Gly	Asp	Phe	Ala	Ser	Pro	Lys	Ala	Thr	His	Ser
1175						1180					1185			
Thr	Val	Ile	Pro	Leu	Ala	Thr	Arg	His	Phe	Arg	Glu	Asp	Thr	Ser
1190						1195					1200			
Ala	Ser	Tyr	Gln	Glu	Ala	His	Thr	Glu	Leu	Glu	Pro	Val	Ser	Pro
1205						1210					1215			
Asn	Ser	Gly	Cys	Glu	Thr	Thr	Leu	Ala	Glu	Ala	Thr	Gly	Thr	Gly
1220						1225					1230			
Val	Thr	Gly	Arg	Asn	Lys	Ser	Gly	Asp	Ala	Val	Arg	Glu	Glu	Lys
1235						1240					1245			
Arg	Ser	Thr	Asn	Leu	Ala	Ala	Asn	Thr	Pro	Gly	Lys	Gly	Gly	Arg
1250						1255					1260			
Leu	Arg	Phe	Ala	Ser	Pro	Ser	Gly	Pro	Gln	Arg	Ala	Gly	Leu	Arg
1265						1270					1275			
Glu	Gly	Ser	Glu	Glu	Lys	Val	Lys	Pro	Pro	Arg	Pro	Arg	Ala	Pro
1280						1285					1290			
Glu	Ser	Asp	Thr	Gly	Asp	Glu	Asp	Gln	Asp	Gln	Glu	Arg	Asp	Thr
1295						1300					1305			
Val	Phe	Leu	Lys	Asp	Asn	His	Leu	Ala	Ile	Glu	Arg	Lys	Cys	Ser
1310						1315					1320			
Ser	Ile	Thr	Val	Ser	Ser	Thr	Ser	Ser	Leu	Glu	Ala	Glu	Val	Asp
1325						1330					1335			
Phe	Thr	Val	Ile	Gly	Asp	Tyr	His	Gly	Ser	Ala	Phe	Glu	Asp	Phe
1340						1345					1350			
Ser	Arg	Ser	Leu	Pro	Glu	Leu	Asp	Arg	Asp	Lys	Ser	Asp	Ser	Asp
1355						1360					1365			
Thr	Glu	Gly	Leu	Leu	Phe	Ser	Arg	Asp	Leu	Asn	Lys	Gly	Ala	Pro



1370		1375		1380
Ser Gln Asp Asp Glu Ser Gly Gly Ile Glu Asp Ser Pro Asp Arg				
1385		1390		1395
Gly Ala Cys Ser Thr Pro Asp Met Pro Gln Phe Glu Pro Val Lys				
1400		1405		1410
Thr Glu Thr Met Thr Val Ser Ser Leu Ala Ile Arg Lys Lys Ile				
1415		1420		1425
Glu Pro Glu Ala Val Leu Gln Thr Arg Val Ser Ala Met Asp Asn				
1430		1435		1440
Thr Gln Val Asp Gly Ser Ala Ser Val Gly Arg Glu Phe Ile Ala				
1445		1450		1455
Thr Thr Pro Ser Ile Thr Thr Glu Thr Ile Ser Thr Thr Met Glu				
1460		1465		1470
Asn Ser Leu Lys Ser Gly Lys Gly Ala Ala Ala Met Ile Pro Gly				
1475		1480		1485
Pro Gln Thr Val Ala Thr Glu Ile Arg Ser Leu Ser Pro Ile Ile				
1490		1495		1500
Gly Lys Asp Val Leu Thr Ser Thr Tyr Gly Ala Thr Ala Glu Thr				
1505		1510		1515
Leu Ser Thr Ser Thr Thr Thr His Val Thr Lys Thr Val Lys Gly				
1520		1525		1530
Gly Phe Ser Glu Thr Arg Ile Glu Lys Arg Ile Ile Ile Thr Gly				
1535		1540		1545
Asp Glu Asp Val Asp Gln Asp Gln Ala Leu Ala Leu Ala Ile Lys				
1550		1555		1560
Glu Ala Lys Leu Gln His Pro Asp Met Leu Val Thr Lys Ala Val				
1565		1570		1575
Val Tyr Arg Glu Thr Asp Pro Ser Pro Glu Glu Arg Asp Lys Lys				
1580		1585		1590

Pro Gln Lys  
1595

<210> 48  
<211> 455  
<212> PRT  
<213> Homo sapien

<400> 48

Met Ala Ala Pro Glu Glu His Asp Ser Pro Thr Glu Ala Ser Gln Pro  
1 5 10 15

Ile Val Glu Glu Glu Glu Thr Lys Thr Phe Lys Asp Leu Gly Val Thr  
20 25 30

Asp Val Leu Cys Glu Ala Cys Asp Gln Leu Gly Trp Thr Lys Pro Thr  
35 40 45

Lys Ile Gln Ile Glu Ala Ile Pro Leu Ala Leu Gln Gly Arg Asp Ile  
50 55 60

Ile Gly Leu Ala Glu Thr Gly Ser Gly Lys Thr Gly Ala Phe Ala Leu  
65 70 75 80

Pro Ile Leu Asn Ala Leu Leu Glu Thr Pro Gln Arg Leu Phe Ala Leu  
85 90 95

Val Leu Thr Pro Thr Arg Glu Leu Ala Phe Gln Ile Ser Glu Gln Phe  
100 105 110

Glu Ala Leu Gly Ser Ser Ile Gly Val Gln Ser Ala Val Ile Val Gly  
115 120 125

Gly Ile Asp Ser Met Ser Gln Ser Leu Ala Leu Ala Lys Lys Pro His  
130 135 140

Ile Ile Ile Ala Thr Pro Gly Arg Leu Ile Asp His Leu Glu Asn Thr  
145 150 155 160

Lys Gly Phe Asn Leu Arg Ala Leu Lys Tyr Leu Val Met Asp Glu Ala  
165 170 175

Asp Arg Ile Leu Asn Met Asp Phe Glu Thr Glu Val Asp Lys Ile Leu  
180 185 190

Lys Val Ile Pro Arg Asp Arg Lys Thr Phe Leu Phe Ser Ala Thr Met  
 195 200 205

Thr Lys Lys Val Gln Lys Leu Gln Arg Ala Ala Leu Lys Asn Pro Val  
 210 215 220

Lys Cys Ala Val Ser Ser Lys Tyr Gln Thr Val Glu Lys Leu Gln Gln  
 225 230 235 240

Tyr Tyr Ile Phe Ile Pro Ser Lys Phe Lys Asp Thr Tyr Leu Val Tyr  
 245 250 255

Ile Leu Asn Glu Leu Ala Gly Asn Ser Phe Met Ile Phe Cys Ser Thr  
 260 265 270

Cys Asn Asn Thr Gln Arg Thr Ala Leu Leu Leu Arg Asn Leu Gly Phe  
 275 280 285

Thr Ala Ile Pro Leu His Gly Gln Met Ser Gln Ser Lys Arg Leu Gly  
 290 295 300

Ser Leu Asn Lys Phe Lys Ala Lys Ala Arg Ser Ile Leu Leu Ala Thr  
 305 310 315 320

Asp Val Ala Ser Arg Gly Leu Asp Ile Pro His Val Asp Val Val Val  
 325 330 335

Asn Phe Asp Ile Pro Thr His Ser Lys Asp Tyr Ile His Arg Val Gly  
 340 345 350

Arg Thr Ala Arg Ala Gly Arg Ser Gly Lys Ala Ile Thr Phe Val Thr  
 355 360 365

Gln Tyr Asp Val Glu Leu Phe Gln Arg Ile Glu His Leu Ile Gly Lys  
 370 375 380

Lys Leu Pro Gly Phe Pro Thr Gln Asp Asp Glu Val Met Met Leu Thr  
 385 390 395 400

Glu Arg Val Ala Glu Ala Gln Arg Phe Ala Arg Met Glu Leu Arg Glu  
 405 410 415

His Gly Glu Lys Lys Lys Arg Ser Arg Glu Asp Ala Gly Asp Asn Asp  
 420 425 430

Asp Thr Glu Gly Ala Ile Gly Val Arg Asn Lys Val Ala Gly Gly Lys  
 435 440 445

Met Lys Lys Arg Lys Gly Arg  
 450 455

<210> 49  
 <211> 246  
 <212> PRT  
 <213> Homo sapien

<400> 49

Met Ala Trp Ala Pro Leu Leu Leu Thr Leu Leu Ser Leu Leu Thr Gly  
 1 5 10 15

Ser Leu Ser Gln Pro Ile Leu Thr Gln Pro Pro Ser Ala Ser Ala Ser  
 20 25 30

Leu Gly Ala Ser Val Thr Leu Thr Cys Ser Val Ser Ser Asp Tyr Lys  
 35 40 45

Asn Leu Glu Val Asp Trp Phe Gln Gln Arg Pro Gly Lys Gly Pro Arg  
 50 55 60

Phe Val Met Arg Val Gly Thr Gly Gly Val Val Gly Phe Arg Gly Ala  
 65 70 75 80

Asp Ile Pro Asp Arg Phe Ser Val Ser Gly Ser Gly Leu Asn Arg Phe  
 85 90 95

Leu Thr Ile Arg Asn Ile Glu Glu Glu Asp Glu Ser Asp Tyr His Cys  
 100 105 110

Gly Thr Asp Leu Gly Ser Gly Thr Ser Phe Val Ser Trp Val Phe Gly  
 115 120 125

Gly Gly Thr Lys Leu Thr Val Leu Ser Gln Pro Lys Ala Ala Pro Ser  
 130 135 140

Val Thr Leu Phe Pro Pro Ser Ser Glu Glu Leu Gln Ala Asn Lys Ala  
 145 150 155 160

Thr Leu Val Cys Leu Ile Ser Asp Phe Tyr Pro Gly Ala Val Thr Val  
 165 170 175

Ala Trp Lys Ala Asp Ser Ser Pro Val Lys Ala Gly Val Glu Thr Thr  
 180 185 190

Thr Pro Ser Lys Gln Ser Asn Asn Lys Tyr Ala Ala Ser Ser Tyr Leu  
 195 200 205

Ser Leu Thr Pro Glu Gln Trp Lys Ser Asn Arg Ser Tyr Ser Cys Gln  
 210 215 220

Val Thr His Glu Gly Ser Thr Val Glu Lys Thr Val Ala Pro Thr Glu  
 225 230 235 240

Cys Ser Thr Glu Cys Ser  
 245

<210> 50  
 <211> 228  
 <212> PRT  
 <213> Homo sapien

<400> 50

Ala Asn Ala Leu Gly Pro Cys Ala Glu Ile Val Met Thr Gln Thr Pro  
 1 5 10 15

Leu Ser Leu Ser Ile Thr Pro Gly Glu Gln Ala Ser Met Ser Cys Arg  
 20 25 30

Ser Ser Gln Ser Leu Leu His Ser Asp Gly Tyr Thr Tyr Leu Tyr Trp  
 35 40 45

Phe Leu Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Glu Val  
 50 55 60

Ser Asn Arg Phe Ser Gly Val Ser Pro Ile Arg Phe Ser Gly Ser Gly  
 65 70 75 80

Ser Gly Arg Glu Phe Thr Leu Arg Ile Ser Arg Val Glu Ala Asp Asp  
 85 90 95

Ala Gly Val Tyr Tyr Cys Met Gln Thr Thr Gln Thr Pro Asn Thr Phe  
 100 105 110

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg Thr Val Ala Ala Pro Ser  
 115 120 125

Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala  
130 135 140

Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val  
145 150 155 160

Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser  
165 170 175

Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr  
180 185 190

Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Leu Tyr Ala Cys  
195 200 205

Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn  
210 215 220

Arg Gly Glu Cys  
225

<210> 51  
<211> 106  
<212> PRT  
<213> Homo sapien

<400> 51

Gly Gln Pro Lys Ala Asn Pro Thr Val Thr Leu Phe Pro Pro Ser Ser  
1 5 10 15

Glu Glu Leu Gln Ala Asn Lys Ala Thr Leu Val Cys Leu Ile Ser Asp  
20 25 30

Phe Tyr Pro Gly Ala Val Thr Val Ala Trp Lys Ala Asp Gly Ser Pro  
35 40 45

Val Lys Ala Gly Val Glu Thr Thr Lys Pro Ser Lys Gln Ser Asn Asn  
50 55 60

Lys Tyr Ala Ala Ser Ser Tyr Leu Ser Leu Thr Pro Glu Gln Trp Lys  
65 70 75 80

Ser His Arg Ser Tyr Ser Cys Gln Val Thr His Glu Gly Ser Thr Val  
85 90 95

Glu Lys Thr Val Ala Pro Thr Glu Cys Ser  
 100 105

<210> 52  
 <211> 56  
 <212> PRT  
 <213> Homo sapien

<400> 52

Arg Thr Gly Tyr Glu Glu Glu Thr Trp Asn Leu Lys Glu Cys Val Gly  
 1 5 10 15

Arg Cys Ala Asn Pro Asn Val Asn Phe Leu Thr Lys Val Glu Ser Pro  
 20 25 30

Gly Met Val Gln Arg Trp Gly Leu Leu Leu Cys Arg Arg Asp Ser Arg  
 35 40 45

Phe Thr Pro Trp Gln Lys Ile Tyr  
 50 55

<210> 53  
 <211> 824  
 <212> PRT  
 <213> Homo sapien

<400> 53

Met Ala Phe Ala Ser Phe Arg Arg Ile Leu Ala Leu Ser Thr Phe Glu  
 1 5 10 15

Lys Arg Lys Ser Arg Glu Tyr Glu His Val Arg Arg Asp Leu Asp Pro  
 20 25 30

Asn Glu Val Trp Glu Ile Val Gly Glu Leu Gly Asp Gly Ser Phe Gly  
 35 40 45

Met Val Tyr Lys Ala Lys Asn Lys Glu Thr Gly Ala Leu Ala Ala Ala  
 50 55 60

Ile Val Ile Glu Thr Lys Ser Glu Glu Glu Leu Glu Asp Tyr Ile Val  
 65 70 75 80

Glu Ile Glu Ile Leu Ala Thr Cys Asp His Pro Tyr Ile Val Lys Leu  
 85 90 95

Leu Gly Ala Tyr Tyr His Asp Gly Lys Leu Trp Ile Met Ile Glu Phe  
 100 105 110

Cys Pro Gly Gly Ala Val Asp Ala Ile Met Leu Glu Leu Asp Arg Gly  
 115 120 125

Leu Thr Glu Pro Gln Ile Gln Val Val Cys Arg Gln Met Leu Glu Ala  
 130 135 140

Leu Asn Phe Leu His Ser Lys Arg Ile Ile His Arg Asp Leu Lys Ala  
 145 150 155 160

Gly Asn Val Leu Met Thr Leu Glu Gly Asp Ile Arg Leu Ala Asp Phe  
 165 170 175

Gly Val Ser Ala Lys Asn Leu Lys Thr Leu Gln Lys Arg Asp Ser Phe  
 180 185 190

Ile Gly Thr Pro Tyr Trp Met Ala Pro Glu Val Val Met Cys Glu Thr  
 195 200 205

Met Lys Asp Thr Pro Tyr Asp Tyr Lys Ala Asp Ile Trp Ser Leu Gly  
 210 215 220

Ile Thr Leu Ile Glu Met Ala Gln Ile Glu Pro Pro His His Glu Leu  
 225 230 235 240

Asn Pro Met Arg Val Leu Leu Lys Ile Ala Lys Ser Asp Pro Pro Thr  
 245 250 255

Leu Leu Thr Pro Ser Lys Trp Ser Val Glu Phe Arg Asp Phe Leu Lys  
 260 265 270

Ile Ala Leu Asp Lys Asn Pro Glu Thr Arg Pro Ser Ala Ala Ala Ala  
 275 280 285

Leu Glu His Pro Phe Val Ser Ser Ile Thr Ser Asn Lys Ala Leu Arg  
 290 295 300

Glu Leu Val Ala Glu Ala Lys Ala Glu Val Met Glu Glu Ile Glu Asp  
 305 310 315 320

Gly Arg Asp Glu Gly Glu Glu Glu Asp Ala Val Asp Ala Ala Ser Thr  
 325 330 335



Leu Glu Asn His Thr Gln Asn Ser Ser Glu Val Ser Pro Pro Ser Leu  
 340 345 350

Asn Ala Asp Lys Pro Leu Glu Glu Ser Pro Ser Thr Pro Leu Ala Pro  
 355 360 365

Ser Gln Ser Gln Asp Ser Val Asn Glu Pro Cys Ser Gln Pro Ser Gly  
 370 375 380

Asp Arg Ser Leu Gln Thr Thr Ser Pro Pro Val Val Ala Pro Gly Asn  
 385 390 395 400

Glu Asn Gly Leu Ala Val Pro Val Pro Leu Arg Lys Ser Arg Pro Val  
 405 410 415

Ser Met Asp Ala Arg Ile Gln Val Ala Gln Glu Lys Gln Val Ala Glu  
 420 425 430

Gln Gly Gly Asp Leu Ser Pro Ala Ala Asn Arg Ser Gln Lys Ala Ser  
 435 440 445

Gln Ser Arg Pro Asn Ser Ser Ala Leu Glu Thr Leu Gly Gly Glu Lys  
 450 455 460

Leu Ala Asn Gly Ser Leu Glu Pro Pro Ala Gln Ala Ala Pro Gly Pro  
 465 470 475 480

Ser Lys Arg Asp Ser Asp Cys Ser Ser Leu Cys Thr Ser Glu Ser Met  
 485 490 495

Asp Tyr Gly Thr Asn Leu Ser Thr Asp Leu Ser Leu Asn Lys Glu Met  
 500 505 510

Gly Ser Leu Ser Ile Lys Asp Pro Lys Leu Tyr Lys Lys Thr Leu Lys  
 515 520 525

Arg Thr Arg Lys Phe Val Val Asp Gly Val Glu Val Ser Ile Thr Thr  
 530 535 540

Ser Lys Ile Ile Ser Glu Asp Glu Lys Lys Asp Glu Glu Met Arg Phe  
 545 550 555 560

Leu Arg Arg Gln Glu Leu Arg Glu Leu Arg Leu Leu Gln Lys Glu Glu  
 565 570 575

His Arg Asn Gln Thr Gln Leu Ser Asn Lys His Glu Leu Gln Leu Glu  
580 585 590

Gln Met His Lys Arg Phe Glu Gln Glu Ile Asn Ala Lys Lys Lys Phe  
595 600 605

Phe Asp Thr Glu Leu Glu Asn Leu Glu Arg Gln Gln Lys Gln Gln Val  
610 615 620

Glu Lys Met Glu Gln Asp His Ala Val Arg Arg Arg Glu Glu Ala Arg  
625 630 635 640

Arg Ile Arg Leu Glu Gln Asp Arg Asp Tyr Thr Arg Phe Gln Glu Gln  
645 650 655

Leu Lys Leu Met Lys Lys Glu Val Lys Asn Glu Val Glu Lys Leu Pro  
660 665 670

Arg Gln Gln Arg Lys Glu Ser Met Lys Gln Lys Met Glu Glu His Thr  
675 680 685

Gln Lys Lys Gln Leu Leu Asp Arg Asp Phe Val Ala Lys Gln Lys Glu  
690 695 700

Asp Leu Glu Leu Ala Met Lys Arg Leu Thr Thr Asp Asn Arg Arg Glu  
705 710 715 720

Ile Cys Asp Lys Glu Arg Glu Cys Leu Met Lys Lys Gln Glu Leu Leu  
725 730 735

Arg Asp Arg Glu Ala Ala Leu Trp Glu Met Glu Glu His Gln Leu Gln  
740 745 750

Glu Arg His Gln Leu Val Lys Gln Gln Leu Lys Asp Gln Tyr Phe Leu  
755 760 765

Gln Arg His Glu Leu Leu Arg Lys His Glu Lys Glu Arg Glu Gln Met  
770 775 780

Gln Arg Tyr Asn Gln Arg Met Ile Glu Gln Leu Lys Val Arg Gln Gln  
785 790 795 800

Gln Glu Lys Ala Arg Leu Pro Lys Ile Gln Arg Ser Glu Gly Lys Thr

805

810

815

Arg Met Ala Met Tyr Lys Lys Ser  
820

<210> 54  
<211> 1997  
<212> PRT  
<213> Homo sapien

<400> 54

Met Leu Ser His Gly Ala Gly Leu Ala Leu Trp Ile Thr Leu Ser Leu  
1 5 10 15

Leu Gln Thr Gly Leu Ala Glu Pro Glu Arg Cys Asn Phe Thr Leu Ala  
20 25 30

Glu Ser Lys Ala Ser Ser His Ser Val Ser Ile Gln Trp Arg Ile Leu  
35 40 45

Gly Ser Pro Cys Asn Phe Ser Leu Ile Tyr Ser Ser Asp Thr Leu Gly  
50 55 60

Ala Ala Leu Cys Pro Thr Phe Arg Ile Asp Asn Thr Thr Tyr Gly Cys  
65 70 75 80

Asn Leu Gln Asp Leu Gln Ala Gly Thr Ile Tyr Asn Phe Arg Ile Ile  
85 90 95

Ser Leu Asp Glu Glu Arg Thr Val Val Leu Gln Thr Asp Pro Leu Pro  
100 105 110

Pro Ala Arg Phe Gly Val Ser Lys Glu Lys Thr Thr Ser Thr Ser Leu  
115 120 125

His Val Trp Trp Thr Pro Ser Ser Gly Lys Val Thr Ser Tyr Glu Val  
130 135 140

Gln Leu Phe Asp Glu Asn Asn Gln Lys Ile Gln Gly Val Gln Ile Gln  
145 150 155 160

Glu Ser Thr Ser Trp Asn Glu Tyr Thr Phe Phe Asn Leu Thr Ala Gly  
165 170 175

Ser Lys Tyr Asn Ile Ala Ile Thr Ala Val Ser Gly Gly Lys Arg Ser

180	185	190
Phe Ser Val Tyr Thr Asn Gly Ser Thr Val Pro Ser Pro Val Lys Asp		
195	200	205
Ile Gly Ile Ser Thr Lys Ala Asn Ser Leu Leu Ile Ser Trp Ser His		
210	215	220
Gly Ser Gly Asn Val Glu Arg Tyr Arg Leu Met Leu Met Asp Lys Gly		
225	230	235
Ile Leu Val His Gly Gly Val Val Asp Lys His Ala Thr Ser Tyr Ala		
	245	250
		255
Phe His Gly Leu Ser Pro Gly Tyr Leu Tyr Asn Leu Thr Val Met Thr		
	260	265
		270
Glu Ala Ala Gly Leu Gln Asn Tyr Arg Trp Lys Leu Val Arg Thr Ala		
	275	280
		285
Pro Met Glu Val Ser Asn Leu Lys Val Thr Asn Asp Gly Ser Leu Thr		
	290	295
		300
Ser Leu Lys Val Lys Trp Gln Arg Pro Pro Gly Asn Val Asp Ser Tyr		
305	310	315
		320
Asn Ile Thr Leu Ser His Lys Gly Thr Ile Lys Glu Ser Arg Val Leu		
	325	330
		335
Ala Pro Trp Ile Thr Glu Thr His Phe Lys Glu Leu Val Pro Gly Arg		
	340	345
		350
Leu Tyr Gln Val Thr Val Ser Cys Val Ser Gly Glu Leu Ser Ala Gln		
	355	360
		365
Lys Met Ala Val Gly Arg Thr Phe Pro Asp Lys Val Ala Asn Leu Glu		
	370	375
		380
Ala Asn Asn Asn Gly Arg Met Arg Ser Leu Val Val Ser Trp Ser Pro		
385	390	395
		400
Pro Ala Gly Asp Trp Glu Gln Tyr Arg Ile Leu Leu Phe Asn Asp Ser		
	405	410
		415

Val Val Leu Leu Asn Ile Thr Val Gly Lys Glu Glu Thr Gln Tyr Val  
 420 425 430

Met Asp Asp Thr Gly Leu Val Pro Gly Arg Gln Tyr Glu Val Glu Val  
 435 440 445

Ile Val Glu Ser Gly Asn Leu Lys Asn Ser Glu Arg Cys Gln Gly Arg  
 450 455 460

Thr Val Pro Leu Ala Val Leu Gln Leu Arg Val Lys His Ala Asn Glu  
 465 470 475 480

Thr Ser Leu Ser Ile Met Trp Gln Thr Pro Val Ala Glu Trp Glu Lys  
 485 490 495

Tyr Ile Ile Ser Leu Ala Asp Arg Asp Leu Leu Leu Ile His Lys Ser  
 500 505 510

Leu Ser Lys Asp Ala Lys Glu Phe Thr Phe Thr Asp Leu Val Pro Gly  
 515 520 525

Arg Lys Tyr Met Ala Thr Val Thr Ser Ile Ser Gly Asp Leu Lys Asn  
 530 535 540

Ser Ser Ser Val Lys Gly Arg Thr Val Pro Ala Gln Val Thr Asp Leu  
 545 550 555 560

His Val Ala Asn Gln Gly Met Thr Ser Ser Leu Phe Thr Asn Trp Thr  
 565 570 575

Gln Ala Gln Gly Asp Val Glu Phe Tyr Gln Val Leu Leu Ile His Glu  
 580 585 590

Asn Val Val Ile Lys Asn Glu Ser Ile Ser Ser Glu Thr Ser Arg Tyr  
 595 600 605

Ser Phe His Ser Leu Lys Ser Gly Ser Leu Tyr Ser Val Val Val Thr  
 610 615 620

Thr Val Ser Gly Gly Ile Ser Ser Arg Gln Val Val Val Glu Gly Arg  
 625 630 635 640

Thr Val Pro Ser Ser Val Ser Gly Val Thr Val Asn Asn Ser Gly Arg  
 645 650 655

Asn Asp Tyr Leu Ser Val Ser Trp Leu Val Ala Pro Gly Asp Val Asp  
660 665 670

Asn Tyr Glu Val Thr Leu Ser His Asp Gly Lys Val Val Gln Ser Leu  
675 680 685

Val Ile Ala Lys Ser Val Arg Glu Cys Ser Phe Ser Ser Leu Thr Pro  
690 695 700

Gly Arg Leu Tyr Thr Val Thr Ile Thr Thr Arg Ser Gly Lys Tyr Glu  
705 710 715 720

Asn His Ser Phe Ser Gln Glu Arg Thr Val Pro Asp Lys Val Gln Gly  
725 730 735

Val Ser Val Ser Asn Ser Ala Arg Ser Asp Tyr Leu Arg Val Ser Trp  
740 745 750

Val Tyr Ala Thr Gly Asp Phe Asp His Tyr Glu Val Thr Ile Lys Asn  
755 760 765

Lys Asn Asn Phe Ile Gln Thr Lys Ser Ile Pro Lys Ser Glu Asn Glu  
770 775 780

Cys Val Phe Val Gln Leu Val Pro Gly Arg Leu Tyr Ser Val Thr Val  
785 790 795 800

Thr Thr Lys Ser Gly Gln Tyr Glu Ala Asn Glu Gln Gly Asn Gly Arg  
805 810 815

Thr Ile Pro Glu Pro Val Lys Asp Leu Thr Leu Arg Asn Arg Ser Thr  
820 825 830

Glu Asp Leu His Val Thr Trp Ser Gly Ala Asn Gly Asp Val Asp Gln  
835 840 845

Tyr Glu Ile Gln Leu Leu Phe Asn Asp Met Lys Val Phe Pro Pro Phe  
850 855 860

His Leu Val Asn Thr Ala Thr Glu Tyr Arg Phe Thr Ser Leu Thr Pro  
865 870 875 880

Gly Arg Gln Tyr Lys Ile Leu Val Leu Thr Ile Ser Gly Asp Val Gln  
885 890 895

Gln Ser Ala Phe Ile Glu Gly Phe Thr Val Pro Ser Ala Val Lys Asn  
 900 905 910

Ile His Ile Ser Pro Asn Gly Ala Thr Asp Ser Leu Thr Val Asn Trp  
 915 920 925

Thr Pro Gly Gly Gly Asp Val Asp Ser Tyr Thr Val Ser Ala Phe Arg  
 930 935 940

His Ser Gln Lys Val Asp Ser Gln Thr Ile Pro Lys His Val Phe Glu  
 945 950 955 960

His Thr Phe His Arg Leu Glu Ala Gly Glu Gln Tyr Gln Ile Met Ile  
 965 970 975

Ala Ser Val Ser Gly Ser Leu Lys Asn Gln Ile Asn Val Val Gly Arg  
 980 985 990

Thr Val Pro Ala Ser Val Gln Gly Val Ile Ala Asp Asn Ala Tyr Ser  
 995 1000 1005

Ser Tyr Ser Leu Ile Val Ser Trp Gln Lys Ala Ala Gly Val Ala  
 1010 1015 1020

Glu Arg Tyr Asp Ile Leu Leu Leu Thr Glu Asn Gly Ile Leu Leu  
 1025 1030 1035

Arg Asn Thr Ser Glu Pro Ala Thr Thr Lys Gln His Lys Phe Glu  
 1040 1045 1050

Asp Leu Thr Pro Gly Lys Lys Tyr Lys Ile Gln Ile Leu Thr Val  
 1055 1060 1065

Ser Gly Gly Leu Phe Ser Lys Glu Ala Gln Thr Glu Gly Arg Thr  
 1070 1075 1080

Val Pro Ala Ala Val Thr Asp Leu Arg Ile Thr Glu Asn Ser Thr  
 1085 1090 1095

Arg His Leu Ser Phe Arg Trp Thr Ala Ser Glu Gly Glu Leu Ser  
 1100 1105 1110

Trp Tyr Asn Ile Phe Leu Tyr Asn Pro Asp Gly Asn Leu Gln Glu

1115		1120		1125
Arg Ala Gln Val Asp Pro Leu Val Gln Ser Phe Ser Phe Gln Asn				
1130		1135		1140
Leu Leu Gln Gly Arg Met Tyr Lys Met Val Ile Val Thr His Ser				
1145		1150		1155
Gly Glu Leu Ser Asn Glu Ser Phe Ile Phe Gly Arg Thr Val Pro				
1160		1165		1170
Ala Ser Val Ser His Leu Arg Gly Ser Asn Arg Asn Thr Thr Asp				
1175		1180		1185
Ser Leu Trp Phe Asn Trp Ser Pro Ala Ser Gly Asp Phe Asp Phe				
1190		1195		1200
Tyr Glu Leu Ile Leu Tyr Asn Pro Asn Gly Thr Lys Lys Glu Asn				
1205		1210		1215
Trp Lys Asp Lys Asp Leu Thr Glu Trp Arg Phe Gln Gly Leu Val				
1220		1225		1230
Pro Gly Arg Lys Tyr Val Leu Trp Val Val Thr His Ser Gly Asp				
1235		1240		1245
Leu Ser Asn Lys Val Thr Ala Glu Ser Arg Thr Ala Pro Ser Pro				
1250		1255		1260
Pro Ser Leu Met Ser Phe Ala Asp Ile Ala Asn Thr Ser Leu Ala				
1265		1270		1275
Ile Thr Trp Lys Gly Pro Pro Asp Trp Thr Asp Tyr Asn Asp Phe				
1280		1285		1290
Glu Leu Gln Trp Leu Pro Arg Asp Ala Leu Thr Val Phe Asn Pro				
1295		1300		1305
Tyr Asn Asn Arg Lys Ser Glu Gly Arg Ile Val Tyr Gly Leu Arg				
1310		1315		1320
Pro Gly Arg Ser Tyr Gln Phe Asn Val Lys Thr Val Ser Gly Asp				
1325		1330		1335



Ser	Trp	Lys	Thr	Tyr	Ser	Lys	Pro	Ile	Phe	Gly	Ser	Val	Arg	Thr
1340						1345					1350			
Lys	Pro	Asp	Lys	Ile	Gln	Asn	Leu	His	Cys	Arg	Pro	Gln	Asn	Ser
1355						1360					1365			
Thr	Ala	Ile	Ala	Cys	Ser	Trp	Ile	Pro	Pro	Asp	Ser	Asp	Phe	Asp
1370						1375					1380			
Gly	Tyr	Ser	Ile	Glu	Cys	Arg	Lys	Met	Asp	Thr	Gln	Glu	Val	Glu
1385						1390					1395			
Phe	Ser	Arg	Lys	Leu	Glu	Lys	Glu	Lys	Ser	Leu	Leu	Asn	Ile	Met
1400						1405					1410			
Met	Leu	Val	Pro	His	Lys	Arg	Tyr	Leu	Val	Ser	Ile	Lys	Val	Gln
1415						1420					1425			
Ser	Ala	Gly	Met	Thr	Ser	Glu	Val	Val	Glu	Asp	Ser	Thr	Ile	Thr
1430						1435					1440			
Met	Ile	Asp	Arg	Pro	Pro	Pro	Pro	Pro	Pro	His	Ile	Arg	Val	Asn
1445						1450					1455			
Glu	Lys	Asp	Val	Leu	Ile	Ser	Lys	Ser	Ser	Ile	Asn	Phe	Thr	Val
1460						1465					1470			
Asn	Cys	Ser	Trp	Phe	Ser	Asp	Thr	Asn	Gly	Ala	Val	Lys	Tyr	Phe
1475						1480					1485			
Thr	Val	Val	Val	Arg	Glu	Ala	Asp	Gly	Ser	Asp	Glu	Leu	Lys	Pro
1490						1495					1500			
Glu	Gln	Gln	His	Pro	Leu	Pro	Ser	Tyr	Leu	Glu	Tyr	Arg	His	Asn
1505						1510					1515			
Ala	Ser	Ile	Arg	Val	Tyr	Gln	Thr	Asn	Tyr	Phe	Ala	Ser	Lys	Cys
1520						1525					1530			
Ala	Glu	Asn	Pro	Asn	Ser	Asn	Ser	Lys	Ser	Phe	Asn	Ile	Lys	Leu
1535						1540					1545			
Gly	Ala	Glu	Met	Glu	Ser	Leu	Gly	Gly	Lys	Cys	Asp	Pro	Thr	Gln
1550						1555					1560			

Gln Lys	Phe Cys Asp Gly	Pro	Leu Lys Pro His Thr	Ala Tyr Arg
1565		1570		1575
Ile Ser	Ile Arg Ala Phe Thr	Gln Leu Phe Asp Glu	Asp Leu Lys	
1580		1585		1590
Glu Phe	Thr Lys Pro Leu Tyr	Ser Asp Thr Phe Phe	Ser Leu Pro	
1595		1600		1605
Ile Thr	Thr Glu Ser Glu Pro	Leu Phe Gly Ala Ile	Glu Gly Val	
1610		1615		1620
Ser Ala	Gly Leu Phe Leu Ile	Gly Met Leu Val Ala	Val Val Ala	
1625		1630		1635
Leu Leu	Ile Cys Arg Gln Lys	Val Ser His Gly Arg	Glu Arg Pro	
1640		1645		1650
Ser Ala	Arg Leu Ser Ile Arg	Arg Asp Arg Pro Leu	Ser Val His	
1655		1660		1665
Leu Asn	Leu Gly Gln Lys Gly	Asn Arg Lys Thr Ser	Cys Pro Ile	
1670		1675		1680
Lys Ile	Asn Gln Phe Glu Gly	His Phe Met Lys Leu	Gln Ala Asp	
1685		1690		1695
Ser Asn	Tyr Leu Leu Ser Lys	Glu Tyr Glu Glu Leu	Lys Asp Val	
1700		1705		1710
Gly Arg	Asn Gln Ser Cys Asp	Ile Ala Leu Leu Pro	Glu Asn Arg	
1715		1720		1725
Gly Lys	Asn Arg Tyr Asn Asn	Ile Leu Pro Tyr Asp	Ala Thr Arg	
1730		1735		1740
Val Lys	Leu Ser Asn Val Asp	Asp Asp Pro Cys Ser	Asp Tyr Ile	
1745		1750		1755
Asn Ala	Ser Tyr Ile Pro Gly	Asn Asn Phe Arg Arg	Glu Tyr Ile	
1760		1765		1770
Val Thr	Gln Gly Pro Leu Pro	Gly Thr Lys Asp Asp	Phe Trp Lys	
1775		1780		1785

Met	Val	Trp	Glu	Gln	Asn	Val	His	Asn	Ile	Val	Met	Val	Thr	Gln
1790						1795					1800			
Cys	Val	Glu	Lys	Gly	Arg	Val	Lys	Cys	Asp	His	Tyr	Trp	Pro	Ala
1805						1810					1815			
Asp	Gln	Asp	Ser	Leu	Tyr	Tyr	Gly	Asp	Leu	Ile	Leu	Gln	Met	Leu
1820						1825					1830			
Ser	Glu	Ser	Val	Leu	Pro	Glu	Trp	Thr	Ile	Arg	Glu	Phe	Lys	Ile
1835						1840					1845			
Cys	Gly	Glu	Glu	Gln	Leu	Asp	Ala	His	Arg	Leu	Ile	Arg	His	Phe
1850						1855					1860			
His	Tyr	Thr	Val	Trp	Pro	Asp	His	Gly	Val	Pro	Glu	Thr	Thr	Gln
1865						1870					1875			
Ser	Leu	Ile	Gln	Phe	Val	Arg	Thr	Val	Arg	Asp	Tyr	Ile	Asn	Arg
1880						1885					1890			
Ser	Pro	Gly	Ala	Gly	Pro	Thr	Val	Val	His	Cys	Ser	Ala	Gly	Val
1895						1900					1905			
Gly	Arg	Thr	Gly	Thr	Phe	Ile	Ala	Leu	Asp	Arg	Ile	Leu	Gln	Gln
1910						1915					1920			
Leu	Asp	Ser	Lys	Asp	Ser	Val	Asp	Ile	Tyr	Gly	Ala	Val	His	Asp
1925						1930					1935			
Leu	Arg	Leu	His	Arg	Val	His	Met	Val	Gln	Thr	Glu	Cys	Gln	Tyr
1940						1945					1950			
Val	Tyr	Leu	His	Gln	Cys	Val	Arg	Asp	Val	Leu	Arg	Ala	Arg	Lys
1955						1960					1965			
Leu	Arg	Ser	Glu	Gln	Glu	Asn	Pro	Leu	Phe	Pro	Ile	Tyr	Glu	Asn
1970						1975					1980			
Val	Asn	Pro	Glu	Tyr	His	Arg	Asp	Pro	Val	Tyr	Ser	Arg	His	
1985						1990					1995			

<211> 453  
 <212> PRT  
 <213> Homo sapien

<400> 55

Met Lys Leu Leu Val Ile Leu Leu Phe Ser Gly Leu Ile Thr Gly Phe  
 1 5 10 15

Arg Ser Asp Ser Ser Ser Ser Leu Pro Pro Lys Leu Leu Leu Val Ser  
 20 25 30

Phe Asp Gly Phe Arg Ala Asp Tyr Leu Lys Asn Tyr Glu Phe Pro His  
 35 40 45

Leu Gln Asn Phe Ile Lys Glu Gly Val Leu Val Glu His Val Lys Asn  
 50 55 60

Val Phe Ile Thr Lys Thr Phe Pro Asn His Tyr Ser Ile Val Thr Gly  
 65 70 75 80

Leu Tyr Glu Glu Ser His Gly Ile Val Ala Asn Ser Met Tyr Asp Ala  
 85 90 95

Val Thr Lys Lys His Phe Ser Asp Ser Asn Asp Lys Asp Pro Phe Trp  
 100 105 110

Trp Asn Glu Ala Val Pro Ile Trp Val Thr Asn Gln Leu Gln Glu Asn  
 115 120 125

Arg Ser Ser Ala Ala Ala Met Trp Pro Gly Thr Asp Val Pro Ile His  
 130 135 140

Asp Thr Ile Ser Ser Tyr Phe Met Asn Tyr Asn Ser Ser Val Ser Phe  
 145 150 155 160

Glu Glu Arg Leu Asn Asn Ile Thr Met Trp Leu Asn Asn Ser Asn Pro  
 165 170 175

Pro Val Thr Phe Ala Thr Leu Tyr Trp Glu Glu Pro Asp Ala Ser Gly  
 180 185 190

His Lys Tyr Gly Pro Glu Asp Lys Glu Asn Met Ser Arg Val Leu Lys  
 195 200 205

Lys Ile Asp Asp Leu Ile Gly Asp Leu Val Gln Arg Leu Lys Met Leu

210		215		220
Gly Leu Trp Glu Asn Leu Asn Val Ile Ile Thr Ser Asp His Gly Met				
225		230		235 240
Thr Gln Cys Ser Gln Asp Arg Leu Ile Asn Leu Asp Ser Cys Ile Asp				
	245		250	255
His Ser Tyr Tyr Thr Leu Ile Asp Leu Ser Pro Val Ala Ala Ile Leu				
	260		265	270
Pro Lys Ile Asn Arg Thr Glu Val Tyr Asn Lys Leu Lys Asn Cys Ser				
	275		280	285
Pro His Met Asn Val Tyr Leu Lys Glu Asp Ile Pro Asn Arg Phe Tyr				
	290		295	300
Tyr Gln His Asn Asp Arg Ile Gln Pro Ile Ile Leu Val Ala Asp Glu				
305		310		315 320
Gly Trp Thr Ile Val Leu Asn Glu Ser Ser Gln Lys Leu Gly Asp His				
	325		330	335
Gly Tyr Asp Asn Ser Leu Pro Ser Met His Pro Phe Leu Ala Ala His				
	340		345	350
Gly Pro Ala Phe His Lys Gly Tyr Lys His Ser Thr Ile Asn Ile Val				
	355		360	365
Asp Ile Tyr Pro Met Met Cys His Ile Leu Gly Leu Lys Pro His Pro				
	370		375	380
Asn Asn Gly Thr Phe Gly His Thr Lys Cys Leu Leu Val Asp Gln Trp				
385		390		395 400
Cys Ile Asn Leu Pro Glu Ala Ile Ala Ile Val Ile Gly Ser Leu Leu				
	405		410	415
Val Leu Thr Met Leu Thr Cys Leu Ile Ile Ile Met Gln Asn Arg Leu				
	420		425	430
Ser Val Pro Arg Pro Phe Ser Arg Leu Gln Leu Gln Glu Asp Asp Asp				
	435		440	445

Asp Pro Leu Ile Gly  
450

<210> 56  
<211> 537  
<212> PRT  
<213> Homo sapien

<400> 56

Met Ser Lys Pro His Ser Glu Ala Gly Thr Ala Phe Ile Gln Thr Gln  
1 5 10 15

Gln Leu His Ala Ala Met Ala Asp Thr Phe Leu Glu His Met Cys Arg  
20 25 30

Leu Asp Ile Asp Ser Pro Pro Ile Thr Ala Arg Asn Thr Gly Ile Ile  
35 40 45

Cys Thr Ile Gly Pro Ala Ser Arg Ser Val Glu Thr Leu Lys Glu Met  
50 55 60

Ile Lys Ser Gly Met Asn Val Ala Arg Leu Asn Phe Ser His Gly Thr  
65 70 75 80

His Glu Tyr His Ala Glu Thr Ile Lys Asn Val Arg Thr Ala Thr Glu  
85 90 95

Ser Phe Ala Ser Asp Pro Ile Leu Tyr Arg Pro Val Ala Val Ala Leu  
100 105 110

Asp Thr Lys Gly Pro Glu Ile Arg Thr Gly Leu Ile Lys Gly Ser Gly  
115 120 125

Thr Ala Glu Val Glu Leu Lys Lys Gly Ala Thr Leu Lys Ile Thr Leu  
130 135 140

Asp Asn Ala Tyr Met Glu Lys Cys Asp Glu Asn Ile Leu Trp Leu Asp  
145 150 155 160

Tyr Lys Asn Ile Cys Lys Val Val Glu Val Gly Ser Lys Ile Tyr Val  
165 170 175

Asp Asp Gly Leu Ile Ser Leu Gln Val Lys Gln Lys Gly Ala Asp Phe  
180 185 190

Leu Val Thr Glu Val Glu Asn Gly Gly Ser Leu Gly Ser Lys Lys Gly  
 195 200 205

Val Asn Leu Pro Gly Ala Ala Val Asp Leu Pro Ala Val Ser Glu Lys  
 210 215 220

Asp Ile Pro Gly Ser Glu Ser Leu Gly Val Glu Gln Asp Val Asp Met  
 225 230 235 240

Val Phe Ala Ser Phe His Pro Ala Lys Ala Ser Gly Cys Pro Met Glu  
 245 250 255

Ala Leu Gly Ala Val Leu Gly Arg Glu Gly Lys Arg Asn Ile Lys Ile  
 260 265 270

Ile Ser Lys Ile Glu Asn His Glu Gly Val Arg Arg Phe Asp Glu Ile  
 275 280 285

Leu Glu Ala Ser Asp Gly Ile Met Val Ala Arg Gly Asp Leu Gly Ile  
 290 295 300

Glu Ile Pro Ala Glu Lys Val Phe Leu Ala Gln Lys Met Met Ile Gly  
 305 310 315 320

Arg Cys Asn Pro Arg Thr Gly Lys Pro Val Ile Cys Ala Thr Gln Met  
 325 330 335

Leu Glu Ser Ile Ile Lys Lys Pro Arg Pro Thr Arg Ala Glu Gly Ser  
 340 345 350

Asp Val Ala Asn Ala Val Leu Asp Gly Ala Asp Cys Ile Met Leu Ser  
 355 360 365

Gly Glu Thr Ala Lys Gly Asp Tyr Pro Leu Glu Ala Val Arg Met Gln  
 370 375 380

His Leu Ile Ala Arg Glu Ala Glu Ala Ala Ile Tyr His Leu Gln Leu  
 385 390 395 400

Phe Glu Glu Leu Arg Arg Leu Ala Pro Ile Thr Ser Asp Pro Thr Glu  
 405 410 415

Ala Thr Ala Val Gly Ala Val Glu Ala Ser Phe Lys Cys Cys Ser Gly  
 420 425 430

Ala Ile Ile Val Leu Thr Lys Ser Gly Arg Ser Ala His Gln Val Ala  
 435 440 445

Arg Tyr Arg Pro Arg Ala Pro Ile Ile Ala Val Thr Arg Asn Pro Gln  
 450 455 460

Thr Ala Arg Gln Ala His Leu Tyr Arg Gly Ile Phe Pro Val Leu Cys  
 465 470 475 480

Lys Asp Pro Val Gln Glu Ala Trp Ala Glu Asp Val Asp Leu Arg Val  
 485 490 495

Asn Phe Ala Met Asn Val Gly Lys Ala Arg Gly Phe Phe Lys Lys Gly  
 500 505 510

Asp Val Val Ile Val Leu Thr Gly Trp Arg Pro Gly Ser Gly Phe Thr  
 515 520 525

Asn Thr Met Arg Val Val Pro Val Pro  
 530 535